Ashly Audio, Inc. | 847 Holt Road | Webster, NY 14580-9103 USA | US toll free: +1-800-828-6308 | tel: +1-585-872-0010 | fax: +1-585-872-0739 | sales@ashly.com | www.ashly.com | Ashly is a division of Jam Industries, Ltd.

5-Year Warranty | Hand-built in Webster, NY | 70V Rated | 100V Rated

ASHLY

PEMA4125
PEMA4250
PEMA8125
PEMA8250

PEMA™

Protea-Equipped Media Amplifier

PEMA™ sets a new industry benchmark for value-engineered zone sound systems. By seamlessly merging our powerful, open-architecture DSP functionality paired amplifier performance inside a two-rack space unit, PEMA lowers overall system cost, occupies less space, improves energy efficiency, and both speeds and simplifies system installation and programming. Four and eight amplifier channel versions are available at both 125 and 250 Watts per channel. Full 96kHz performance is available on 32-bit SHARC processors for utterly transparent audio.

PEMA changes the way consultants and integrators approach sound system design. With only the addition of input sources and output speakers, PEMA delivers an elegant solution with less cabling, less rack space, and less installation time, using proven DSP and amplifier technology that will awe clients with its simplicity, sophistication, and reliability.

In addition to DSP algorithms such as FIR filter capability, ambient noise compensation, advanced automatic feedback suppression, automatic mixer, and a full complement of filters, EQs, delays, and the like, PEMA offers DSP control of the amplifier functionality as well: selection of bridge-mode operation, HPF settings for constant voltage system networks, stereo-linking of channel pairs, MIC/LINE/TEL-PAGE functions on channel 1, full control of ducking priorities, and full-range remote-gain control capability.

PEMA's I/O count and formats are ideal for small to mid-sized installations. Each variant has eight balanced input channels that are software selectable for mic or line levels. The first channel may also be set for a transformer isolated, TEL-PBX level. Additionally there are eight pairs of summed-mono RCA connectors optimized for consumer line level devices. Eight preamp auxiliary outputs allow integrators to route signals from the matrix mixer to anywhere the system requires.

As a member of the respected Protea™ DSP lineage, PEMA is remarkably easy to program and deploy. All set up is accomplished using standard 10/100 Ethernet protocol and our *Protea™ ne Software* on a PC platform. Hot-plug DSP placement allows users to insert any function into any channel block, even when running live audio. Automatic DHCP network IP configuration reduces network set up time. Lockable front panel controls and multi-level software security with password access guarantee a tamper-proof audio system.

PEMA Features:

- CobraNet® and Dante® network audio fully supported
- FIR Filter capable
- 8-in x 8-out sophisticated matrix mixing
- 8 built-in mic pre's
- Gain sharing automatic microphone mixing (Automixer)
- Automatic feedback suppression
- Ambient noise compensation
- Dedicated telephone/PBX input
- Dual RCA and balanced euroblock inputs
- Post DSP AUX line level outputs
- Stereo summed to mono
- Event scheduling (RTC)
- Adjustable HP/LP filters
- Built-in pink/white noise & sine wave generator
- Full suite of Ashly Protea™ DSP
- Hot-plug DSP placement
- 96kHz or 48kHz sample rate
- 32-Bit SHARC DSP
- 24-Bit A/D–D/A audio resolution
- 15V phantom power for mic inputs
- Full control using Ashly software over 10/100 baseT Ethernet
- Easy and intuitive user interface
- Automatic DHCP network IP configuration
- Euroblock connectors for preset recall, DC remote level control and serial data control
- External control via Ashly standard wall remotes, Ashly Ethernet wall remotes or *Ashly Remote* iPad® App
- Level control via variable DC control voltage
- Stand-By mode activation via contact closure
- Multi-level Security
- Safety/Compliance: ¸TUV$_{us}$, CE, FCC, RoHS

PEMA Models	4125	8125	4250	8250
Continuous Average Power: Output Per Channel, Low Z Models, Stereo Mode, 20Hz–20kHz, 1%THD, All Channels Driven				
4 Ohms	125W	125W	250W	250W
8 Ohms	75W	75W	150W	150W
Low Z Output: Bridge Mode, 20Hz–20kHz, 1% THD, All Channels Driven				
8 Ohms	250W	250W	500W	500W
70V, 100V Distributed Output: 20Hz–20kHz, 1% THD, All Channels Driven				
70V (per channel)	125W	125W	250W	250W
100V (per channel)	125W	125W	250W	250W
Line Current Draw: 120V, All Channels Driven				
Standby Mode	190mA	290mA	190mA	290mA
Idle (no signal)	590mA	565mA	540mA	565mA
1/8 Max Power, Pink Noise, All Channels Driven				
Typical	1.70A	2.78A	2.85A	5.0A
1/3 Max Power, Sine Wave, All Channels Driven				
Maximum	3.27A	5.78A	6.00A	11.0A
Thermal Dissipation: BTU/hr, All Channels Driven				
Standby Mode	46.7	63.8	46.7	63.8
Idle *(no signal)*	123	187	123	187
1/8 Max Power, Pink Noise, All Channels Driven				
Typical	232	444	341	700
1/3 Max Power, Sine Wave, All Channels Driven				
Maximum	251	481	378	775
Signal to Noise				
20Hz–20kHz, Unweighted	>102dB	>102dB	>105dB	>105dB

Front Panel LED Indicators		
Unit Status		
POWER	*Blue*	Switch: On, Off
STANDBY	*Yellow*	Standby, flashing
PROTECT	*Red*	On, Off
DISABLE	*Yellow*	On, Off
COM	*Green*	On, for Ethernet data or Device ID
Each Channel		
SIGNAL LEVEL	*Red*	Clip/Mute
	Yellow	-6dB
	Green	-18dB, -12dB
BRIDGE	*Green*	Per Channel
TEMP	*Yellow*	Per Channel
CURRENT	*Green*	Per Channel: Proportional to output

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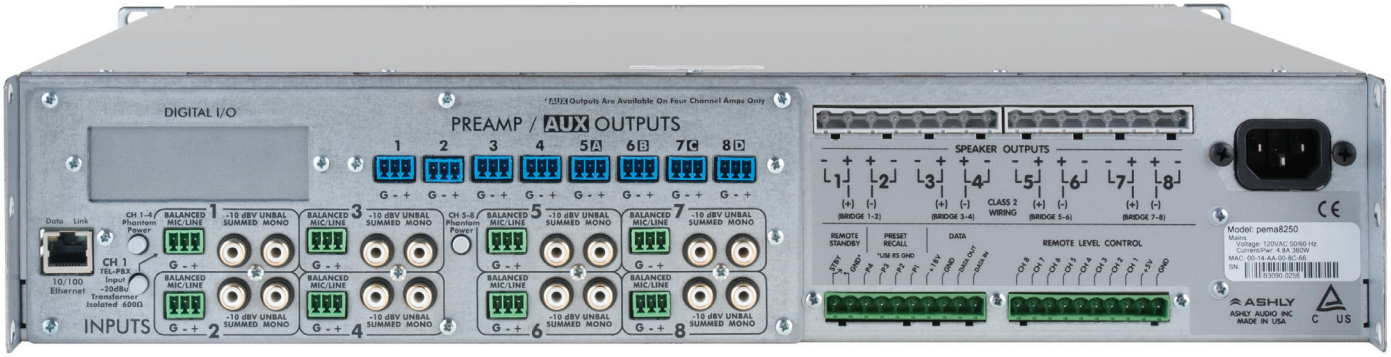
PEMA uses Neutrik® Components



pema 8250 Rear Panel

PEMA™

Protea-Equipped Media Amplifier

Specifications	*Note: 0dBu = 0.775 VRMS*
Input Sensitivity (Low Z models)	3.2dBu (4125/8125) 6.2dBu (4250/8250) 7.2dBu (70V/100V models)
Voltage Gain	26dB (Low Z models), 32dB (70V models) 35dB (100V models)
Damping Factor	>250 (8 Ohm load, <1kHz)
Distortion	<0.5% (SMPTE, typical) <0.5% (THD-N, typical, 8 Ohm, 10dB below rated power, 20Hz–20kHz)
Channel Separation	-80dB (dB from full output, 1kHz)
Frequency Response	20Hz–20kHz, +/-1dB
Mic/Line Input Impedance	4.8k Ohms
Mic/Line Maximum Input Level	+21dBu
Mic/Line Preamp Gain	0, +20dB, +40dB, +60dB
Mic/Line Phantom Power	+15V, switchable ch. 1-4, 5-8
Summed Mono	3.16k Ohm (Input Impedance) +11dBu (Maximum Input Level)
Channel 1 TEL-PBX	3.9k Ohm (Input Impedance) +21dBu (Maximum Input Level)
Preamp Output Maximum Level	+8dBu
AUX Output Maximum Level	+20dBu
Environmental	40-120 deg. F, (4-49 deg, C) (noncondensing)

Rear Panel	
Controls	Ethernet 10/100, Channel 1 TEL-PBX Switch, Remote Standby, Preset Recall (4), Remote Level (8), Remote Data
Connectors (each channel)	Input: Euroblock Output: Euroblock

Audio Connections
1 Euro connector balanced input, selectable for Mic, Line or TEL-PBX
7 Euro connector balanced inputs, software selectable for Mic or Line
8 pairs of unbalanced, summed mono RCA connectors optimized for consumer line level (-10dBu) devices
8 Euro connector Preamp/Aux outputs
4 or 8 Euro connector speaker outputs
CobraNet® and Dante® Digital I/O options

Remote Accessories	
WR-1	2-Channel Level Control
WR-1.5	Level and Preset Recall
WR-2	Four-Position Switch
WR-5	Programmable Selector
neWR-5	Programmable Network Remote
FR-8	8-Channel Network Fader Remote
FR-16	16-Channel Network Fader Remote
RD/RW-8C	Serial Data Fader Remote
Ashly Remote	Remote Control Application for Apple® iPad®

Power Requirements	
AC Mains	120VAC or 240VAC, ±10% 50–60Hz
Power Cable Connector	15A Edison, 3-Prong IEC

Weights and Dimensions	
Dimensions	19" W x 3.50" H x 16.84" D (483mm x 89mm x 428mm)
Airflow	IN through sides, OUT through front
Unit Weight	4125/4250: 23.5 lbs (10.7 kg) 8125/8250: 25 lbs (11.3 kg)
Shipping Weight	4125/4250: 30.9 lbs (14 kg) 8125/8250: 32.3 lbs (14.7 kg)
Environmental	40-120 deg. F, (4-49 deg, C) (noncondensing)

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Protēa™

Digital Signal Processing for PEMA™

Protea is compatible with Microsoft® Windows 8, 7 (Vista/XP) 32 & 64 bit systems.

Audio professionals find our *Protea™ DSP* to be very intuitive and easy to navigate—and you will too. No need to attend a one-week training class away from home to learn our software. Common sense layout of controls and features, on-line help, or a visit to the Technical Support page on our website provides answers to all of your questions.

Protēa™ DSP Specifications	
All DSP functions can be linked to 1 of 16 link groups	
Input Source Selection	
Input Source Select Options	Analog, Auto (Net, AES3, Analog)
Brick Wall Limiter	
Threshold	-20dBu to +20dBu
Ratio	Infinite
Attack	0.2ms/dB to 50 ms/dB
Release	5ms/dB to 1000ms/dB
Compressor	
Threshold	-20dBu to +20dBu
Ratio	1.2:1 to ∞
Attack	0.2 to 50ms
Release	5ms/dB to 1000ms/dB
Detector	Peak/Average
Attenuation Bus	2 available
Metering	In, Out, Attenuation, Graphical
Autoleveler Controls	
Target Level	-40dBu to +20dBu
Action	Gentle, normal, aggressive, user defined
Maximum Gain	0dB to +22dB
Metering	Input, Gain, Attenuation
Ratio	1.2:1 to 10:1
Threshold Below Target	-30dB to 0dB
Gain Increase/Decrease Rate	5ms/dB to 1000ms/dB
Hold Time	0-6 sec
Ambient Noise Compensation: *Output Only*	
Max Gain	-20dB to +20dB
Min/Base Gain	-40dB to +20dB
Gain Change Rate	0.2s/dB to 20s/dB
Link Group	16 available
ANC Input Channel	1-4 or 1-8
Noise Threshold	-40dBu to +20dBu
Program/Ambient Gain Ratio	0.3:1 to 3:1
Metering	Input level, Attenuation, Average noise
Ducking: *High/Low Priority, Trigger, Filibuster, Ducked Program*	
Trigger Threshold	-80dBu to +20 dBu
Ducking Release	5ms/dB to 1000ms/dB
Ducking Depth	0dB to -30dB, -∞
Enable Ducking at Matrix Mixer	Yes
Metering	Input
Gate	
Threshold	-80dBu to +20dBu
Range	off, 100dB to 0dB
Attack	0.2ms/dB to 50ms/dB
Release	5ms/dB to 1000ms/dB
Metering	Key Signal, Gate LED, Graphical
Advanced Gate Controls	
Key Engage Enable	Yes
Key Frequency	20Hz–20kHz
Key Bandwidth	0.016 to 3.995 Octave
Gain	
Gain (with/without VCA)	-50dB to +12dB, off, polarity invert
Digital VCA Groups	4 available
Remote RD8C Gain	Enable per channel, 0dB to -∞
WR-5 (neWR-5) Remote Gain	0 to -50dB, Mute
EQ: *FIR Filter (Output only, 48kHz only)*	
File Type	.csv, .fir
EQ: *31-Band Graphic*	
Filter Type	Constant Q or proportional
Bandwidth	0.499oct to 0.25oct
EQ: *Parametric 2,4,6, or 10 Band*	
Frequency	20-20kHz
Level	-30dB to +15dB
Q Value	0.016 to 3.995 Octave
EQ: *Hi/Low Shelf 6/12 dB/oct*	
Frequency	20Hz–20kHz
Level	-15dB to +15dB
EQ: *All Pass*	
Frequency	20Hz–20kHz
EQ: *Variable Q HP/LP*	
Frequency	20Hz–20kHz
Q Value	3.047 to 0.267
EQ: *Notch/Bandpass*	
Frequency	20Hz–20kHz
Q Value	92.436 to 0.267
Feedback Suppressor: *Only available with 48kHz sampling rate*	
Filters	12
In/Out per filter	Yes
Lock per filter and global lock	Yes
Filter Modes	Float, Restricted, Manual
Filter Type	Notch, Parametric
Filter Frequency Range	20Hz to 20kHz
Notch Filter	-∞
Parametric Filter	+15dB to -30dB
Filter Bandwidth	0.016 to 3.995 Octave
Detector Sensitivity	5 levels
Float Time	5 minutes to 24 hours
Crossover: *2 Way, 3 Way, 4 Way Crossover & High Pass/Low Pass Filters*	
Bessel & Butterworth Filters	12/18/24/48 dB/oct
Linkwitz-Riley Filter	12/24/48 dB/oct
Frequency	Off, 20Hz–20KHz
Delay: *@ 48kHz Sampling Rate*	*(Input Time, Distance & Temperature)*
Speaker Delay	0–21ms
Delay	0–682ms
Delay: *@ 96kHz Sampling Rate*	*(Input Time, Distance & Temperature)*
Speaker Delay	0–10.6ms
Delay	0–341ms
Audio Metering Tool	
Range	-60dBu to +20dBu
Increments	1dB
Peak Hold Indicator	Yes
Signal Generator Tool: *Pink noise, White noise, Sine wave*	
Signal Level	Off, -50dBu to +20dBu
Sine Wave Frequency	20Hz–12kHz
Matrix Mixer	
Gain (0.5dB increments)	Off, -50 to +12dB
Mute	Per channel
Auto-mixer Enabled	Per channel
Global Auto-mixer Response	0.01sec to 2sec
Enable Ducking at Mixer	Yes
Ducking LED	Per channel, if enabled
Metering	Level, auto-mixer level
Processors	
Input A/D, Output D/A	24 bit
DSP Processors	32-bit floating point
Sample Rates	48kHz, 96kHz
Propagation Delay @ 48kHz:	1.42ms
Propagation Delay @ 96kHz:	0.71ms

1) Measured 20Hz – 20kHz unweighted using AES17 LPF @ 48kHz sample rate.
2) Analog in to analog out measured using internal master clock.
3) Latency of network audio link is additional to latency of digital audio processor.

PEMA Architect & Engineering Specs

Pema 4125

The powered digital signal processor shall consist of eight inputs and four power amplifier outputs with the ability to assign any input to any output. Each input channel shall include a summed stereo (RCA, +11dB maximum) and mic/line gain stage (3-pin Euroblock, +21dB maximum) capable of 0, +20dB, +40dB, and +60dB of gain with +15V phantom power when selected. Summed stereo input impedance shall be 3.16k Ohms unbalanced and mic/line input impedance shall be 4.8k Ohms active balanced. Channel One shall include a transformer-isolated TEL-PBX select. Each input and output shall have individual mute capability. Each input and output shall have six processing blocks configurable for Dynamics (ambient noise compensation, compressor/limiter, auto-leveler, ducker, gate), Gain (including Group VCA and remote gain), Equalization (FIR filters, 31-band graphic, parametric x 10, feedback suppressor), Crossover, Delay, Metering, and Signal Generator (sine wave, pink noise, white noise). The routing stage shall allow the user to assign an input to any or a combination of outputs and separately adjust how much signal level goes to each output (matrix mixer). The matrix mixer shall also have selectable gain-sharing automatic mixing capability. Each input stage shall have an additional preamp output (post DSP) on the back panel (3-pin Euroblock). Four powered outputs shall deliver 75W @ 8 Ohms, 125W @ 4 Ohms (7.62mm Euroblock), and channel pairs can be bridged for 250W @ 8 Ohms. Frequency response shall be ±1dB 20Hz to 20kHz. Signal-to-Noise shall be greater than 102dB, 20Hz – 20kHz unweighted. LED indicators shall show signal level (-18, -12, -6), clip/mute, bridge, over temperature and over current conditions. Output levels shall be adjusted by front panel volume controls when enabled. Full programming and control of the unit shall be from the rear panel RJ-45 jack connected to a 10/100BASE-T Ethernet LAN connected to a PC running Ashly's Protea NE Software. Thirty internal presets (scenes) shall be standard and four scenes shall be accessible via contact closure. The powered digital processor shall have Cobranet and Dante factory option. A back panel contact closure shall place the unit in "Standby" reducing power consumption when idle. The power switch shall be enabled or disabled as needed. Five password user names and eight levels of security shall be available. A temperature dependent speed-controlled axial fan shall maintain the correct operating temperature. The unit shall weigh 18.5 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high).

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema4125**

Pema 4250

The powered digital signal processor shall consist of eight inputs and four power amplifier outputs with the ability to assign any input to any output. Each input channel shall include a summed stereo (RCA, +11dB maximum) and mic/line gain stage (3-pin Euroblock, +21dB maximum) capable of 0, +20dB, +40dB, and +60dB of gain with +15V phantom power when selected. Summed stereo input impedance shall be 3.16k Ohms unbalanced and mic/line input impedance shall be 4.8k Ohms active balanced. Channel One shall include a transformer-isolated TEL-PBX select. Each input and output shall have individual mute capability. Each input and output shall have six processing blocks configurable for Dynamics (ambient noise compensation, compressor/limiter, auto-leveler, ducker, gate), Gain (including Group VCA and remote gain), Equalization (FIR filters, 31-band graphic, parametric x 10, feedback suppressor), Crossover, Delay, Metering, and Signal Generator (sine wave, pink noise, white noise). The routing stage shall allow the user to assign an input to any or a combination of outputs and separately adjust how much signal level goes to each output (matrix mixer). The matrix mixer shall also have selectable gain-sharing automatic mixing capability. Each input stage shall have an additional preamp output (post DSP) on the back panel (3-pin Euroblock). Four powered outputs shall deliver 150W @ 8 Ohms, 250W @ 4 Ohms (7.62mm Euroblock), and channel pairs can be bridged for 500W @ 8 Ohms. Frequency response shall be ±1dB 20Hz to 20kHz. Signal-to-Noise shall be greater than 102dB, 20Hz – 20kHz unweighted. LED indicators shall show signal level (-18, -12, -6), clip/mute, bridge, over temperature and over current conditions. Output levels shall be adjusted by front panel volume controls when enabled. Full programming and control of the unit shall be from the rear panel RJ-45 jack connected to a 10/100BASE-T Ethernet LAN connected to a PC running Ashly's Protea NE Software. Thirty internal presets (scenes) shall be standard and four scenes shall be accessible via contact closure. The powered digital processor shall have Cobranet and Dante factory option. A back panel contact closure shall place the unit in "Standby" reducing power consumption when idle. The power switch shall be enabled or disabled as needed. Five password user names and eight levels of security shall be available. A temperature dependent speed-controlled axial fan shall maintain the correct operating temperature. The unit shall weigh 18.5 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high).

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema4250**

Pema 4125.70

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The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema4125.70**

Pema4250.70

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ASHLY

PEMA Architect & Engineering Specs

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema4250.70**

Pema8125

The powered digital signal processor shall consist of eight inputs and eight power amplifier outputs with the ability to assign any input to any output. Each input channel shall include a summed stereo (RCA, +11dB maximum) and mic/line gain stage (3-pin Euroblock, +21dB maximum) capable of 0, +20dB, +40dB, and +60dB of gain with +15V phantom power when selected. Summed stereo input impedance shall be 3.16k Ohms unbalanced and mic/line input impedance shall be 4.8k Ohms active balanced. Channel One shall include a transformer-isolated TEL-PBX select. Each input and output shall have individual mute capability. Each input and output shall have six processing blocks configurable for Dynamics (ambient noise compensation, compressor/limiter, auto-leveler, ducker, gate), Gain (including Group VCA and remote gain), Equalization (FIR filters, 31-band graphic, parametric x 10, feedback suppressor), Crossover, Delay, Metering, and Signal Generator (sine wave, pink noise, white noise). The routing stage shall allow the user to assign an input to any or a combination of outputs and separately adjust how much signal level goes to each output (matrix mixer). The matrix mixer shall also have selectable gain-sharing automatic mixing capability. Each input stage shall have an additional preamp output (post DSP) on the back panel (3-pin Euroblock). Eight powered outputs shall deliver 75W @ 8 Ohms, 125W @ 4 Ohms (7.62mm Euroblock), and channel pairs can be bridged for 250W @ 8 Ohms. Frequency response shall be ±1dB 20Hz to 20kHz. Signal-to-Noise shall be greater than 102dB, 20Hz – 20kHz unweighted. LED indicators shall show signal level (-18, -12, -6), clip/mute, bridge, over temperature and over current conditions. Output levels shall be adjusted by front panel volume controls when enabled. Full programming and control of the unit shall be from the rear panel RJ-45 jack connected to a 10/100BASE-T Ethernet LAN connected to a PC running Ashly's Protea NE Software. Thirty internal presets (scenes) shall be standard and four scenes shall be accessible via contact closure. The powered digital processor shall have Cobranet and Dante factory option. A back panel contact closure shall place the unit in "Standby" reducing power consumption when idle. The power switch shall be enabled or disabled as needed. Five password user names and eight levels of security shall be available. A temperature dependent speed-controlled axial fan shall maintain the correct operating temperature. The unit shall weigh 20 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high).

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema8125**

Pema8250

The powered digital signal processor shall consist of eight inputs and eight power amplifier outputs with the ability to assign any input to any output. Each input channel shall include a summed stereo (RCA, +11dB maximum) and mic/line gain stage (3-pin Euroblock, +21dB maximum) capable of 0, +20dB, +40dB, and +60dB of gain with +15V phantom power when selected. Summed stereo input impedance shall be 3.16k Ohms unbalanced and mic/line input impedance shall be 4.8k Ohms active balanced. Channel One shall include a transformer-isolated TEL-PBX select. Each input and output shall have individual mute capability. Each input and output shall have six processing blocks configurable for Dynamics (ambient noise compensation, compressor/limiter, auto-leveler, ducker, gate), Gain (including Group VCA and remote gain), Equalization (FIR filters, 31-band graphic, parametric x 10, feedback suppressor), Crossover, Delay, Metering, and Signal Generator (sine wave, pink noise, white noise). The routing stage shall allow the user to assign an input to any or a combination of outputs and separately adjust how much signal level goes to each output (matrix mixer). The matrix mixer shall also have selectable gain-sharing automatic mixing capability. Each input stage shall have an additional preamp output (post DSP) on the back panel (3-pin Euroblock). Eight powered outputs shall deliver 150W @ 8 Ohms, 250W @ 4 Ohms (7.62mm Euroblock), and channel pairs can be bridged for 500W @ 8 Ohms. Frequency response shall be ±1dB 20Hz to 20kHz. Signal-to-Noise shall be greater than 102dB, 20Hz – 20kHz unweighted. LED indicators shall show signal level (-18, -12, -6), clip/mute, bridge, over temperature and over current conditions. Output levels shall be adjusted by front panel volume controls when enabled. Full programming and control of the unit shall be from the rear panel RJ-45 jack connected to a 10/100BASE-T Ethernet LAN connected to a PC running Ashly's Protea NE Software. Thirty internal presets (scenes) shall be standard and four scenes shall be accessible via contact closure. The powered digital processor shall have Cobranet and Dante factory option. A back panel contact closure shall place the unit in "Standby" reducing power consumption when idle. The power switch shall be enabled or disabled as needed. Five password user names and eight levels of security shall be available. A temperature dependent speed-controlled axial fan shall maintain the correct operating temperature. The unit shall weigh 20 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high).

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema8250**

Pema8125.70

The powered digital signal processor shall consist of eight inputs and eight power amplifier outputs with the ability to assign any input to any output. Each input channel shall include a summed stereo (RCA, +11dB maximum) and mic/line gain stage (3-pin Euroblock, +21dB maximum) capable of 0, +20dB, +40dB, and +60dB of gain with +15V phantom power when selected. Summed stereo input impedance shall be 3.16k Ohms unbalanced and mic/line input impedance shall be 4.8k Ohms active balanced. Channel One shall include a transformer-isolated TEL-PBX select. Each input and output shall have individual mute capability. Each input and output shall have six processing blocks configurable for Dynamics (ambient noise compensation, compressor/limiter, auto-leveler, ducker, gate), Gain (including Group VCA and remote gain), Equalization (FIR filters, 31-band graphic, parametric x 10, feedback suppressor), Crossover, Delay, Metering, and Signal Generator (sine wave, pink noise, white noise). The routing stage shall allow the user to assign an input to any or a combination of outputs and separately adjust how much signal level goes to each output (matrix mixer). The matrix mixer shall also have selectable gain-sharing automatic mixing capability. Each input stage shall have an additional preamp output (post DSP) on the back panel (3-pin Euroblock). Eight powered outputs shall deliver 125W @ 70V (7.62mm Euroblock), and channel pairs can be bridged for 250W @ 240V. Frequency response shall be ±1dB 20Hz to 20kHz. Signal-to-Noise shall be greater than 102dB, 20Hz – 20kHz unweighted. LED indicators shall show signal level (-18, -12, -6), clip/mute, bridge, over temperature and over current conditions. Output levels shall be adjusted by front panel volume controls when enabled. Full programming and control of the unit shall be from the rear panel RJ-45 jack connected to a 10/100BASE-T Ethernet LAN connected to a PC running Ashly's Protea NE Software. Thirty internal presets (scenes) shall be standard and four scenes shall be accessible via contact closure. The powered digital processor shall have Cobranet and Dante factory option. A back panel contact closure shall place the unit in "Standby" reducing power consumption when idle. The power switch shall be enabled or disabled as needed. Five password user names and
eight levels of security shall be available. A temperature dependent speed-controlled axial fan shall maintain the correct operating temperature. The unit shall weigh 20 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high).

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema8125.70**

Pema8250.70

The powered digital signal processor shall consist of eight inputs and eight power amplifier outputs with the ability to assign any input to any output. Each input channel shall include a summed stereo (RCA, +11dB maximum) and mic/line gain stage (3-pin Euroblock, +21dB maximum) capable of 0, +20dB, +40dB, and +60dB of gain with +15V phantom power when selected. Summed stereo input impedance shall be 3.16k Ohms unbalanced and mic/line input impedance shall be 4.8k Ohms active balanced. Channel One shall include a transformer-isolated TEL-PBX select. Each input and output shall have individual mute capability. Each input and output shall have six processing blocks configurable for Dynamics (ambient noise compensation, compressor/limiter, auto-leveler, ducker, gate), Gain (including Group VCA and remote gain), Equalization (FIR filters, 31-band graphic, parametric x 10, feedback suppressor), Crossover, Delay, Metering, and Signal Generator (sine wave, pink noise, white noise). The routing stage shall allow the user to assign an input to any or a combination of outputs and separately adjust how much signal level goes to each output (matrix mixer). The matrix mixer shall also have selectable gain-sharing automatic mixing capability. Each input stage shall have an additional preamp output (post DSP) on the back panel (3-pin Euroblock). Eight powered outputs shall deliver 250W @ 70V (7.62mm Euroblock), and channel pairs can be bridged for 500W @ 70V. Frequency response shall be ±1dB 20Hz to 20kHz. Signal-to-Noise shall be greater than 102dB, 20Hz – 20kHz unweighted. LED indicators shall show signal level (-18, -12, -6), clip/mute, bridge, over temperature and over current conditions. Output levels shall be adjusted by front panel volume controls when enabled. Full programming and control of the unit shall be from the rear panel RJ-45 jack connected to a 10/100BASE-T Ethernet LAN connected to a PC running Ashly's Protea NE Software. Thirty internal presets (scenes) shall be standard and four scenes shall be accessible via contact closure. The powered digital processor shall have Cobranet and Dante factory option. A back panel contact closure shall place the unit in "Standby" reducing power consumption when idle. The power switch shall be enabled or disabled as needed. Five password user names and eight levels of security shall be available. A temperature dependent speed-controlled axial fan shall maintain the correct operating temperature. The unit shall weigh 20 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high).

The powered digital processor shall be an Ashly PEMA Protea Equipped Media Amplifier model **pema8250.70**

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